

## **LISTING OF CLAIMS:**

1. – 20. (Canceled)

21. (Previously Presented) A method for providing index server support to a file sharing application, said index server provided with information on client devices and their sharable files, said method comprising:

- a) investigating a hierarchical structure of index servers interconnected in a network, said investigating including:
  - generating, at an originator client device, an investigation request message that is directed for handling by a remote indexing server;
  - intercepting, at a first intermediary indexing server, said investigation request message sent, said first intermediary indexing server being a closest index server;
  - notifying said originator client device of the investigation request message of the identity of the first intercepting intermediary index server, and,
  - registering the first intercepting intermediary index server as a parent of said originator client device and storing said intercepting index server identity at said originator client device; and,
- b) repeating, by said first intercepting intermediary index server, said investigating by handling of investigation requests according to said generating, intercepting and notifying of step a) and registering any further intercepting intermediary indexing server as a parent indexing server of said first intermediary indexing server device; and,
- c) repeating steps a) for each originator client device in said network that searches for files;
- d) repeating steps b) for each said further intermediary indexing servers until a root indexing server at a top of said hierarchical structure of index servers in said network is identified as a parent index server; and,
- e) subsequently issuing, by said originating device, a request for a file under said file sharing application, said request utilizing said identity of said first intermediary index server, and:

determining if said first intermediary index server does not find this requested file in its index of client devices and their sharable files, and,

determining if any other children index servers of said first intermediary index server finds this requested file, and, if the file is not found in the index of each said children index servers of said first intermediary index server, then,

requesting a parent index sever of said first intermediary index server to find this requested file, said parent index sever, in response, forwarding the file request to all determined children index servers of said parent index server except to said first intermediary indexing server; and,

determining if any children index servers of said parent index server finds this requested file; and, if the requested file is found,

returning the requested file to said originating client device.